

Offshore Wind Working Group

Friday, October 6th, 2017

9:00 a.m. to 12:00 p.m.

Public Service Commission Hearing Room

861 Silver Lake Blvd.

Dover, DE 19904

Meeting Minutes

Members present:

Bruce Burcat, Chair
Senator David McBride
Senator Harris McDowell
Representative Trey Paradee
Shawn Garvin, DNREC
Robert Howatt, Public Service Commission Staff
Drew Slater, Public Advocate
Albert Shields, Policy Director
Mario Giovannini, Delmarva Power and Light
Mark Nielson, Delaware Electrical Cooperative
Dr. Jeremy Firestone, University of Delaware
Brenna Goggin, Delaware Nature Society
Jeffery Gordon, American Birding Association
Guy Marcozzi, Duffield Associates
Collin O'Mara, National Wildlife Federation
James Maravelias, Delaware State AFL-CIO

Members absent:

Jeff Bullock, Secretary of State
Patrick McCullar, Delaware Municipal Electric Corporation (DEMEC)
Representative Ronald Gray

Designees present:

Doug Denison, designee for Secretary Jeff Bullock
Scott Lynch, designee for DEMEC
Dave Deputy, Chief of Staff of the House Minority Caucus, designee for Rep. Ronald Gray

Staff to the Working Group:

Thomas Noyes, DNREC Division of Energy & Climate

Introductions

Working Group Chair Bruce Burcat opened the meeting at 9:08 a.m. Secretary Garvin welcomed Working Group members on behalf of DNREC. The working group members introduced themselves and their organizations.

Bruce Burcat reiterated that this group is starting off at ground zero and that we want to consider all of the available options. There has been no decision on whether or not offshore wind would be good for Delaware.

Purpose and mission of the Working Group

Mr. Burcat reviewed the purpose and mission of the Working Group. On August 28, Governor Carney signed Executive Order 13 (EO 13), which established the Offshore Wind Working Group. The Working Group will study how Delaware can participate in developing offshore wind, identify ways Delaware can benefit economically and environmentally from offshore wind power, make recommendations for Delaware to move forward in offshore wind power development, and present a report to Governor Carney by December 15.

Tom Noyes, DNREC staff lead to the Working Group, discussed the analysis and briefing materials that will be prepared for the members. He said that Working Group members should tell DNREC what they analysis they would like to see. Any additional resources that Working Group Members have should be sent to Mr. Noyes at Thomas.Noyes@state.de.us. Briefing materials provided to the working group will be put on the webpage at www.de.gov/offshorewind. Public comments will be also be placed on the website for use as a tool for the Working Group and the public. Agendas and meeting minutes will be posted on the public meeting calendar.

Senator McDowell recommended that the group does a thorough review of Delaware's electric needs. Does the state need more power? He pointed to the fact that electricity consumption per person has decreased in the past 10 years and that Delmarva Power should not buy renewable energy credits (RECs) it does not need to avoid incurring unnecessary costs. Mr. Noyes said that DNREC will be working with Delmarva Power to develop an analysis of future renewable energy needs and costs.

Dr. Firestone said that consumption is not the only issue, but that location and the kind of supply should be considered.

Mr. Burcat stated that we want to make sure that Delaware is on a course that makes sense for Delaware.

Mr. Slater expressed his desire to look at Bluewater Wind and try to understand the mistakes made in that process, and its costs to rate payers.

Mr. Noyes said that the Working Group will look at two models for procuring offshore wind: the Maryland Offshore Renewable Energy Credit (OREC) model, and the REC (renewable energy credit) multiplier model.

Mr. Howatt mentioned some financial pieces that need to be considered. He said Delaware has no authority over the offshore wind generating unit and how it will interface with [regional grid operator] PJM. Delaware cannot change the market pricing that PJM sets. He also said that energy sales alone cannot pay for the cost to build the farm. Somebody has to pay this cost, and the group has to consider who that will be. If Delmarva buys offshore wind, Delmarva customers are going to pay, while other unregulated utility customers in the state will get the benefit without having to pay. He also mentioned Bloom Energy and the need to make sure the costs and benefits are properly analyzed.

Mr. Burcat stated that the group needs to know what the costs on consumers will be. He said that the price of offshore wind has dropped dramatically since Bluewater Wind, but may still be higher than other sources of energy.

Senator McDowell agreed with Mr. Burcat stating that the group needs to discuss alternatives to offshore wind as well. For example, what would \$1.7 billion bring to the solar industry?

Mr. O'Mara commented on the need for the group to explore job opportunities that may become available in Delaware with the installation of offshore wind. He said that there are potential opportunities for feeding into the supply chain, especially with the ideal location of the Port of Wilmington as a hub in Delaware that other wind projects in the area could use.

Mr. Slater said the Working Group should to explore the burdens on both industry, as well as small commercial companies.

Senator McDowell said that an equal amount of fossil fuel power would be needed for backup power to wind power, and asked if this would potentially diminish the environmental benefits.

Dr. Firestone commented that there have been lots of studies on the ability of the system to incorporate various renewables into the grid. He also said the climate and health benefits of this project should be analyzed. The national energy laboratories have published a report on this in the journal, *Nature Energy*. In the Massachusetts region, health and climate benefits from the Block Island Offshore Wind project are 14.3 cents/kWh (kilowatt hour) from the Block Island Offshore Wind project, which is greater than the supply costs.

Mr. Burcat mentioned the need to look at the scale of the project. Should we consider a 200 MW (megawatt) project, or would it be better to add on to what Maryland is doing?

Drew Slater stated that the group should be aware that a lot of the air quality issues that in Delaware come from other states and that the group should consider how federal regulations could reduce those upwind emissions.

Mr. Howatt said that a phase in may be an appropriate way to go for the project (i.e. start small scale and work to a larger scale). However, builders say that the larger the scale, the cheaper construction would be.

Mr. O'Mara said that the National Wildlife Federation has some great studies on how we can reduce the impacts on wildlife.

Mr. Noyes asked members to please pass on questions and information that can help with preparing the Working Group's report. Mr. Slater mentioned that the University of Delaware did a study last year in Massachusetts about the economic value and costs of offshore wind.

Delaware and east coast offshore wind

Dr. Firestone provided a brief overview of offshore wind in the region. In Delaware, everything began with deregulation, when Delmarva's rates were frozen for a period. In 2006, the State passed House Bill 6, which mandated Delmarva issue an RFP (request for proposal) for new supply. Three proposals were submitted: a coal plant, a natural gas plant, and the Bluewater Wind proposal. After the four state agencies overseeing the RFP process failed to agree, the question ended up with the General Assembly, which approved the Bluewater Wind proposal of 200 MW, with a 350 percent REC (renewable energy credit) multiplier.

The technology of offshore wind has also improved since Bluewater Wind as turbines have increased in capacity from 5 MW to 10 MW, which can reduce the net cost per turbine by one third.

Bluewater Wind was acquired by an Australian company that got caught up in the recession. Bluewater was then acquired by NRG, which eventually pulled the plug on the project.

Two companies have been approved to build wind projects to serve Maryland. US Wind won approval to build 248 MW in the Maryland Wind Energy Area off of Ocean City. Deepwater Wind (doing business as Skipjack) won approval to build 120 MW in the Delaware Wind Energy Area (the old Bluewater Wind site) off of the Delaware coast. Both Wind Energy Areas have capacity for further development. Both companies have expressed an interest in selling wind power to Delaware's utilities.

Mr. Slater stated that Bluewater Wind received money even though they didn't build the project, and expressed his concern that the cost of a new project could be placed on ratepayers again. Dr. Firestone pointed out that ratepayers are asked to pay \$27/month in construction work in progress (CWIP) for a nuclear power plant that might never be built. Power purchase agreements protect ratepayers, who would only pay for power produced.

Senator McDowell said that the state gave a contract to Bluewater Wind, and the company couldn't perform. Mr. Burcat agreed that the company couldn't deliver. Mr. O'Mara said that there was a financial recession and the change of parties in Congress when Bluewater Wind was being proposed. Forces outside of the state essentially made the project fail.

Mr. Howatt said that one of the recommendations on this project was that Delaware should have a gas turbine plant in southern Delaware to balance the wind farm. Mr. Noyes stated that Delaware has already seen the development of new natural gas plants since the Bluewater Wind proposal, such as the 309 MW natural gas plant in Dover.

The Working Group took a break was at 10:25 a.m., and the meeting resumed at 10:41 a.m.

Overview of the MD OREC procurement

Andrew Gohn, Director of State Policy for the American Wind Energy Association (AWEA) presented information on Maryland offshore wind procurement. Mr. Gohn worked for the Maryland Energy Administration during the development of the OREC (Offshore Wind Renewable Energy Credit) law. He told the Working Group that it took three years to pass the Maryland offshore wind legislation, which created a 2.5% carve out for offshore wind.

ORECs, unlike RECs and SRECs, represent energy and the REC value. A net economic benefits test was created to evaluate proposals. Applicants had to present a cost benefit analysis, including an analysis of rate payer impact, as part of their application. Applications included consideration of environmental benefits and detriments, potential employment opportunities, a plan to engage small businesses, and a decommissioning plan. Certain agricultural and large customers were either exempt or could opt out of the OREC program. Maryland tried to create as much competition, ratepayer protection, and developer protection as possible while creating the legislation.

Northeast states such as Massachusetts, Connecticut, and Rhode Island are creating contract opportunities by issuing RFPs for offshore wind projects.

Mr. Giovannini said that Delmarva Power said it is important to discuss the stresses on utilities when power purchase agreements (PPAs) are used.

Mr. Howatt stated that in Maryland, customers of all utilities paid for ORECs. It is more complicated in Delaware, since there is more of a "Swiss cheese" utility map, with regulated and unregulated utilities. This could make some Delawarean's free riders, if Delmarva customers were the only ones who had to pay for the cost of an offshore wind farm

Mr. Slater asked if Maryland utilities were showing the costs from offshore wind on energy bills. Mr. Gohn responded by saying that the distribution utilities are in charge of that, so it is up to them if they want to display the cost on the bill, and added that PJM will give some credits to customers.

Mr. Gohn also stated that there is some public opposition to the new siting, even though it is seven miles further offshore than originally proposed. Representative Andy Harris from Maryland introduced a bill to require that offshore wind turbine be located at least 24 nautical miles from the Maryland coast. Similar legislation could be introduced in the Maryland legislature.

Dr. Firestone stated that there was an issue with Bluewater Wind coming into Bethany Beach, and said that community engagement is really important. The University of Delaware has done survey work based on public perceptions off of Block Island, before the project was built and after the project was built.

Supply chain and job opportunities

The MD offshore wind projects include provisions requiring investments in supply chain assets in Maryland. Right now, most components and equipment are located and built in Europe. The Maryland Public Service Commission (MD PSC) order specifies that the turbine components will be gathered outside of Baltimore at Sparrows Point. However, the travel time from Sparrows Point to the wind energy areas is 24 hours using very expensive equipment. Travel time from the Port of Wilmington to the WEAs would be much shorter. This locational advantage could be an opportunity for Delaware to compete for supply chain business in the future. The working group needs to determine what pieces of supply chain that Delaware can compete in.

Offshore wind projects are more expensive in the United States than Europe because assembly doesn't exist in the US yet. Deepwater Wind brought a vessel over from Europe at great expense to build the Block Island project. There is a potential to build lift boats in the United States to reduce construction costs.

Mr. Noyes briefly reviewed job projections prepared for the Governors' Wind & Solar Energy Coalition. These projections of US job potential were benchmarked to the European offshore wind business, which has reached 12 gigawatts (GW) of installed capacity. Copies of these reports will be provided to the Working Group.

Schedule and agenda going forward

Prior to the next meeting, information and reading materials will be provided to the Working Group. Secretary Garvin thanked the group for showing up, and reiterated the importance of having everyone attend and engaged in these discussions. Working Group members were asked to send a designee if they are unable to attend. Future meetings have been scheduled for:

- Wednesday, November 1 at 9:00 a.m.
- Wednesday, November 15 at 9:00 a.m.
- Wednesday, November 29 at 9:00 a.m.
- December 11 or 13 at 1:00 p.m.

Members of the Working Group expressed an interest in a second meeting in October. There will also be two public workshops at dates to be determined. At these sessions, the public will be invited to comment and ask questions.

Senator McDowell requested that a list of acronyms be provided to the working group.

Drew Slater asked if the next meeting could be livestreamed. Bob Howatt responded saying that the PSC's live stream equipment is currently being changed, so livestreaming may not be an option at the next meeting.

Public comments

The meeting was opened up to public comment. John Nichols spoke in opposition to buying overpriced renewable energy, and provided written comments.

David Stevenson of the Caesar Rodney Institute offered comments on the cost and questioned the environmental benefit of offshore wind, and provided written comments

Kris Oleth of Ecology and Environment, Inc. spoke, saying she was a former Bluewater Wind employee, and said she would be happy to provide information on offshore wind in New York to the Working Group.

The meeting was adjourned at 11:47 a.m.